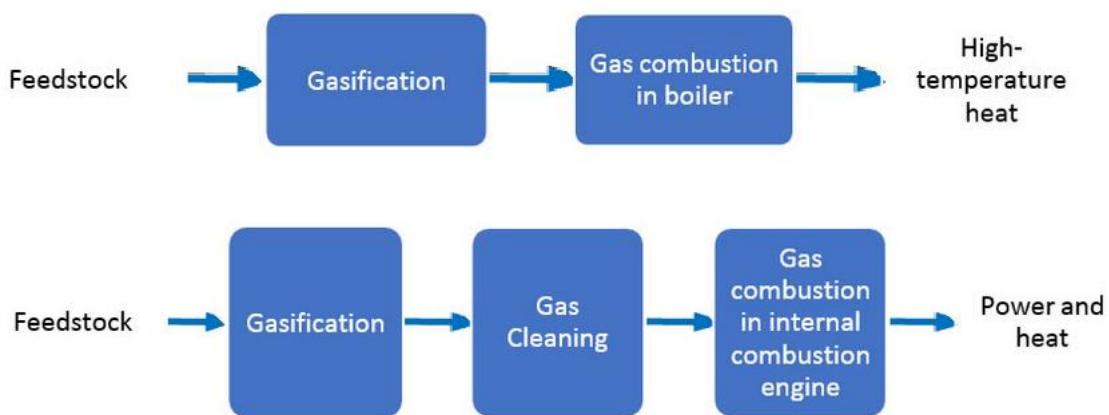


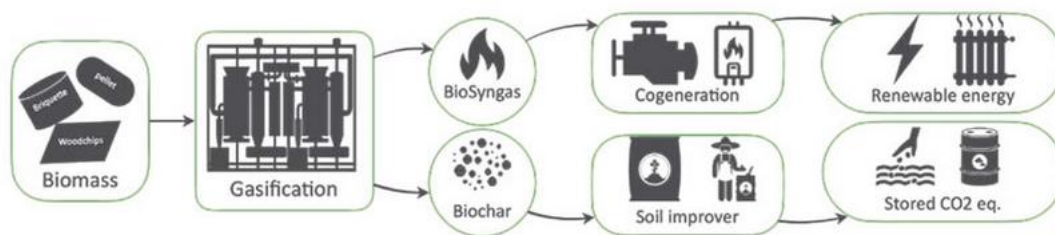


Biomass gasification for heat and power production

Heat or power and heat (CHP) production through biomass gasification is already well-established technology. Just in Europe, there are more than 1700 operational units.



Generally, there are two approaches: the producer gas can be directly combusted in a boiler for production of high temperature heat or cleaned and combusted in an internal combustion engine or gas engine to produce power and heat. A valuable by-product in some cases is biochar.



- High total energy efficiency of 70-90%
- Local feedstock can be used, with energy produced and consumed locally, feedstock flexibility
- Biochar as by-product supports carbon sequestration and boosts soil fertility.

- Cost: 1 kWel (OPEX): €0.0045 - €0.09 per 1 kWh
- 1 kWth (OPEX): €0.018 - €0.045 per 1 kWh
- Carbon footprint: net negative CO₂ footprint